

虛擬示波器遠端監控技術之應用與實踐

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摘要

本研究設計並規劃一套具有遠端自動監控功能之可程式多功能虛擬示波器，這項技術顛覆以往傳統儀器的觀念。此虛擬示波器與現今傳統示波器最大差異之處在於它擁有強大的可程式編輯功能，淺顯易懂的人機介面。虛擬示波器可利用網際網路進行遠端監控，故本研究也針對了網路監控之功能及理論，以虛擬示波器加以實踐。以整體發展技術面向而言，顯示虛擬示波器具有可程式功能、開放的設計架構及可支援網路服務，未來具有多元化的應用發展。

關鍵字: 虛擬示波器; 監控技術; 人機介面

The Application and Practice of Remote Control Technology by the Virtual Oscilloscope

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Abstract

In this research, a multi-function programmable virtual oscilloscope of remote control system is designed and planned. This technology subverts the concepts of the traditional instruments. The differences between the virtual oscilloscope and the traditional oscilloscope are programmable language and easily to understandable human-machine interface. In this paper the virtual oscilloscope is applied in internet with remote control. The theory and practical functions and of the remote control of with the virtual oscilloscope are all introduced and implemented. The developed technology shows the programmable design feature of virtual oscilloscope and network supporting capability. There will be pluralistic applications in the future.

Key words: Virtual oscilloscope; Remote control; Man-machine interface; LabVIEW